

Newlands Hill Wind Energy Hub 132 kV Connection Project

Scottish Power Energy Networks (SPEN) proposes to construct a 132 kV overhead line between the proposed Newlands Hill Wind Energy Hub and Fallago Rig Wind Farm, approximately 6 km southeast of Gifford. The connection passes through the Lammermuir Hills within the East Lothian and Scottish Borders administrative areas.

The grid connection would need to cross the Fallago Rig Wind Farm, which is a highly constrained area. As such, a number of options would need to be considered in this area to overcome the design and technical constraints of crossing an operational wind farm site. The routing for a grid connection through the wind farm site would be subject to detailed design at future project stages to determine the most technically feasible and economically viable solution.

The objective of the consultation is to seek your feedback on the preferred route and use this feedback to inform further design and assessment at subsequent stages of the Scheme.

Who are we?

SPEN is part of the Scottish Power group of companies. We own three regulated electricity network businesses in the UK, including SP Transmission (SPT), SP Distribution, and SP Manweb.

SPEN operates, maintains, and develops the network of cables, overhead lines and substations, which transport electricity to connected homes and businesses in Southern and Central Scotland.

Under Section 9 of the Electricity Act 1989, SPEN has a legal duty to safeguard electricity supplies by keeping the network up to date.

Need for the Scheme

Our country has a target of net zero carbon emissions by 2045. SPEN is strengthening the electricity transmission network as we transition into clean energy production.

Belltown Power is seeking permission for the development of the Newlands Hill Wind Energy Hub. This development would have the capacity to power over 120,000 homes.

The proposed wind energy hub would need to be connected to the transmission network with National Grid for distribution. As the transmission licence holder, SPT, represented by SPEN, is legally obliged under the Electricity Act 1989 to provide this grid connection.

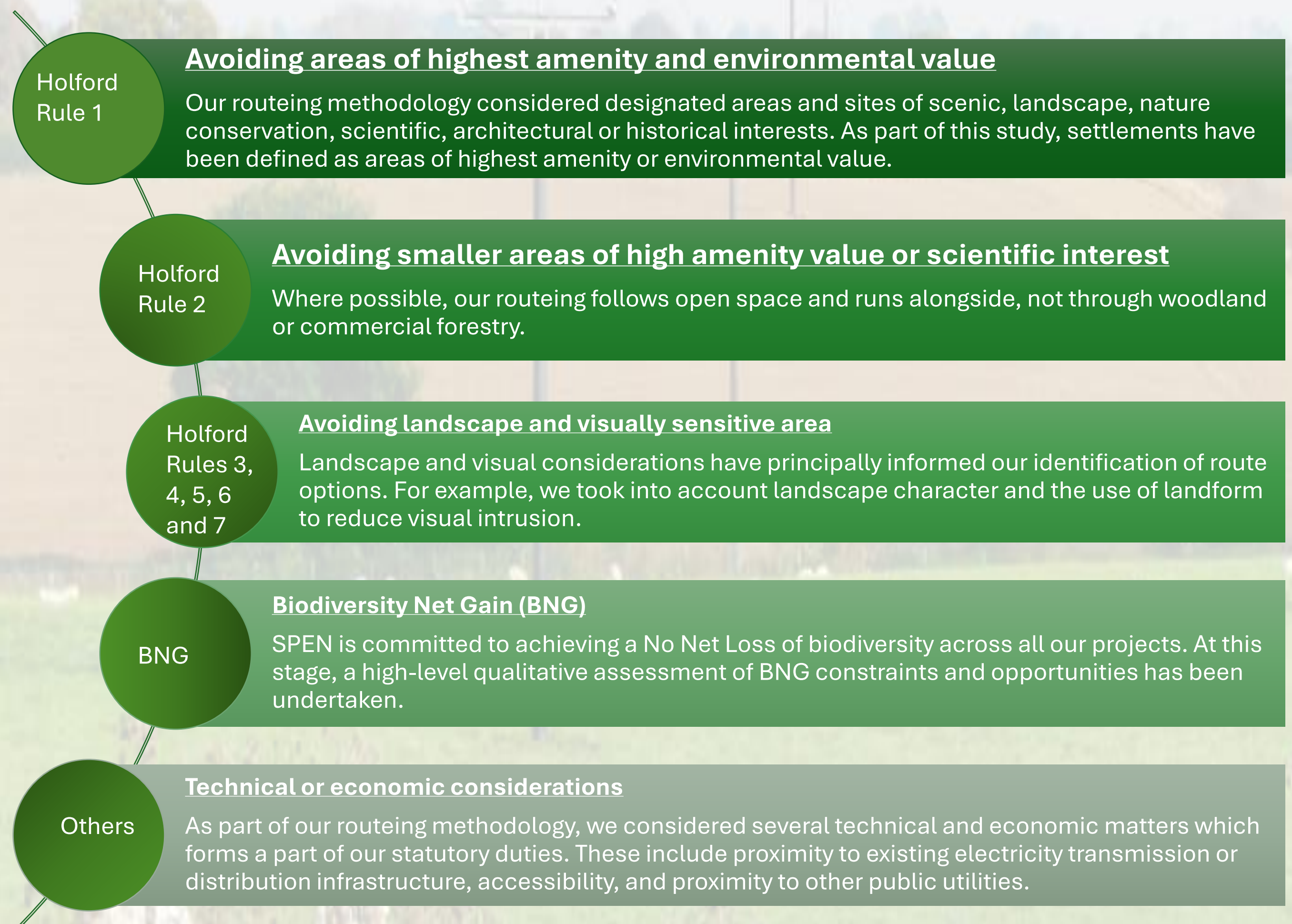


Identifying a Preferred Route

SPEN's approach to routing new electricity transmission infrastructure consists of balancing economic, technical, and environmental considerations. Having established the need for a project, the starting point is to identify an overhead line route.

Our routing considerations for the Newlands Hill Wind Energy Hub 132 kV Connection Project take account of guidance contained in the Holford Rules. It is generally accepted across the electricity industry that this guidance should be used as the basis for routing high voltage overhead lines.

The first principle of our approach is consideration of visual impacts and the degree to which this can be reduced by careful routing. In addition, we consider other environmental and technical matters, and where possible, avoiding the most sensitive and valued natural and man-made features. The chart below sets out our approach to identifying and assessing appropriate route options for the grid connection.



Our Study Area

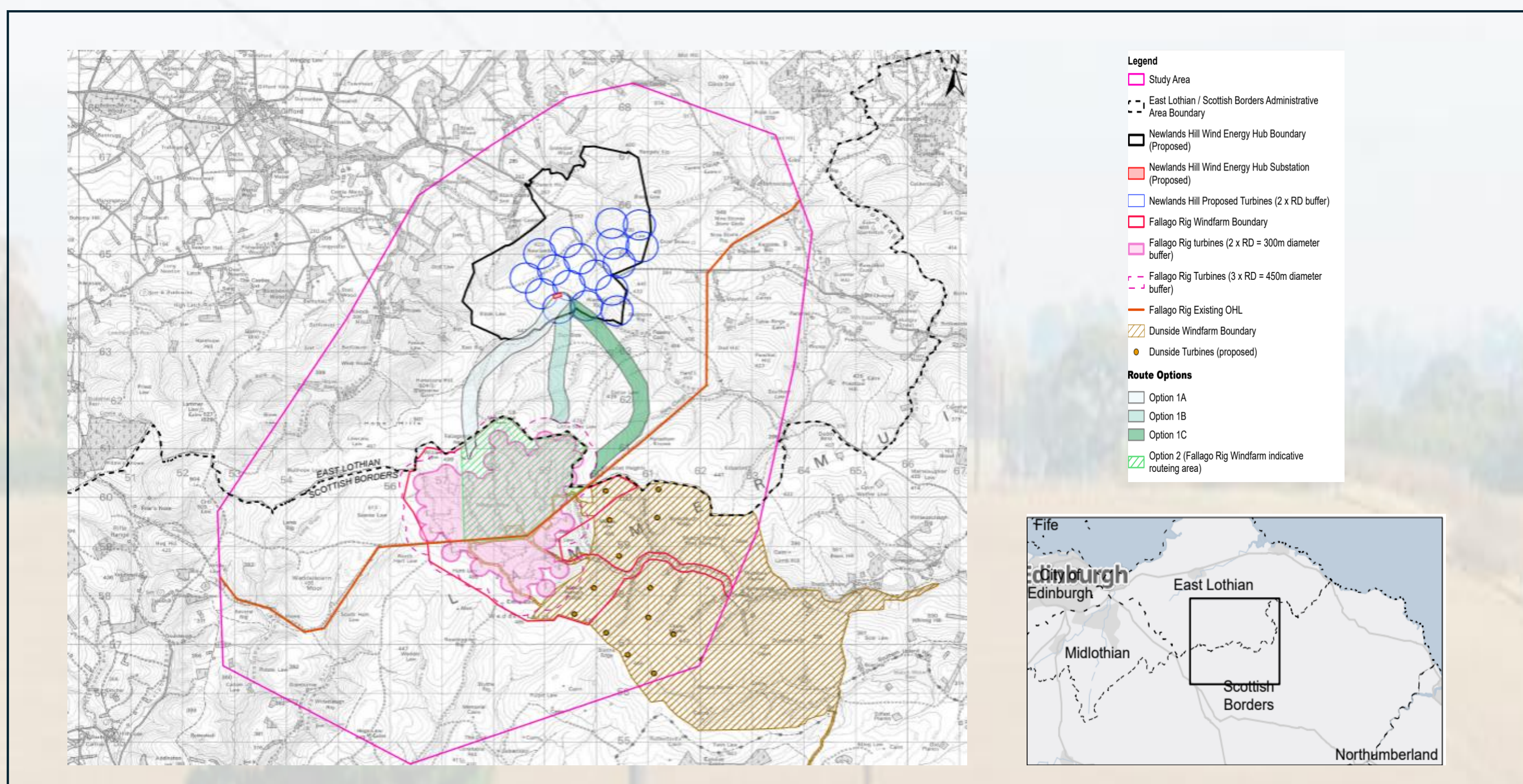
Our study area is derived from consideration of the types of impacts the route options could have on the environment, the local environmental setting and the receptors identified.

The study area encompassing the Lammermuir Hills exhibits high landscape value, which include a number of local landscape designations and the local nature conservation site, 'Lammermuirs', which contains upland heath, bog and grassland habitats.

There are no statutory ecological or historic designations within the study area.

The nearest scheduled monument is located approximately 0.6 km to the west of the route options. The closest Site of Special Scientific Interest is Lammer Law, located approximately 0.8 km west of the route options, which supports one of the largest and least disturbed areas of upland blanket bog and heather moorland in East Lothian.

The proposed Dunside Wind Farm, which comprises up to 14 turbines and battery storage, is located immediately to the east of the Fallago Rig Wind Farm Site, and there are other operational wind farms to the northeast of the study area.



The Scheme

The proposed Newlands Hill Wind Energy Hub is located approximately 5 km north of the existing 400 kV Fallago Rig Wind Farm. The Scheme is located approximately 6km southeast of Gifford.

The grid connection will comprise a 132 kV wood pole overhead lines (OHLs) and any associated ancillary works (approximately 6 km in length) to connect the proposed Newlands Hill Wind Energy Hub to the electricity transmission system at the Fallago Rig Wind Farm Substation.

The proposed extension to the Fallago Rig Substation, to provide additional capacity for this grid connection, is not described here because it is subject to separate planning consent under the Town and Country Planning (Scotland) Act 1997.



Our proposed route

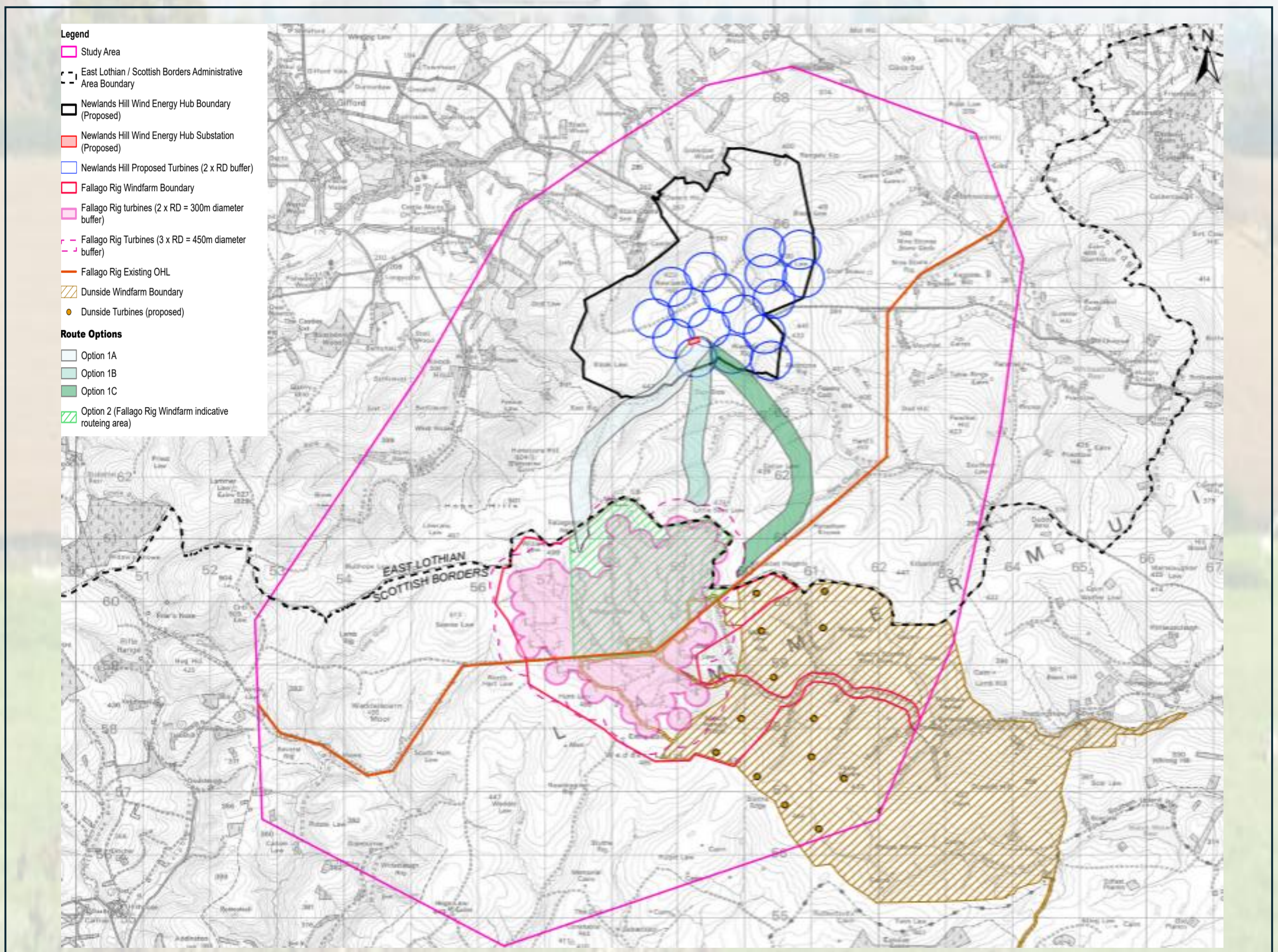
Route Options

A routing exercise was undertaken to identify route options within the study area. These options are generated based on the Holford Rules. Our route options have been developed in such that they:

- Are as direct as possible between Newlands Hill Wind Energy Hub and the substation at the Fallago Rig Wind Farm.
- Minimise, as far as possible, potentially adverse effects on residential and visual amenity by taking account of the pattern and distribution of settlement and individual/clustered properties.
- Minimise potential direct and indirect effects on statutory and non-statutory sites within the study area, habitats and protected species, and recreational and access routes.
- Take account of existing and planned land use and infrastructure as far as possible, including extension of settlements, proximity to existing overhead lines and wind farms.
- Consider biodiversity net gain opportunities.



Our preferred route is **Option 1B**. Route Option 1B provides the shortest and most direct route to the Fallago Rig Wind Farm, traverses a more open and larger scale hillside landform, crosses only short sections of shallow, open, and small-scale river valley forms, and would result in the least disturbance to the landscape and vegetation within the Lammermuir Moorland.



What would the Scheme look like?

Overhead line (OHL) Infrastructure transmits electricity by conductors (or wires) which are suspended at a specified height above ground, and supported by wood poles or steel towers, spaced at intervals.

The conductors can be made of aluminium or steel strands. The grid connection would include a 132 kV single circuit and is proposed to be carried on Trident double 'H' wood poles.



Trident wood poles are typically galvanised steelwork cross-arms supporting aluminium conductors on insulators. These are suitable for supporting single circuit lines operating at 132 kV. Wood poles are fabricated from pressure impregnated softwood, treated with a preservation to prevent damage to structural integrity.

The standard height of trident 'H' poles (including steel work and insulators) typically range between 10 m and 18 m. Pole heights may be required to be increased where circumstances dictate, for example over elevated land, structures or features.

The section of OHL between wood poles is known as the 'span', with the distance between them known as the 'span length'. Span lengths between wood poles average between 80m to 120m, with trident 'H' poles typically having a maximum span of 200m. Span lengths can be increased if there is a requirement to span a larger distance due to the presence of a feature in the landscape such as a river or loch. Equally, at higher altitude, where more extreme weather is prevalent, the span length is typically reduced to take account of greater ice and wind loading factors.

New wood poles are dark brown in colour and weather over time to a light grey. The wood pole top cross-arms are galvanised steel and support the aluminium conductors on stacks of grey insulator discs. Both the steelwork and aluminium will weather and darken over time. In terms of appearance, there are three types of structure:

- Suspension or line: where the pole structure forms part of a straight section of line and no change in direction is required. Straight sections of wood poles include section poles where segmentation is required to contain any failure in the OHL
- Tension or angle: where there is a horizontal or vertical deviation in line direction. The maximum allowable angle deviations on single wood pole designs is 30 degrees, with deviations up to 75 degrees being permitted. All angle structures require to be back stayed.
- Terminal: where the OHL terminates before entry into a substation or on to an underground cable section via a cable sealing end compound or platform.



Next Steps

The Scheme requires consent from the Scottish Ministers under Section 37 of the Electricity Act 1989. In conjunction, SPEN will apply to the Scottish Ministers for deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 (as amended) for the grid connection and any ancillary development such as cabling and access tracks. While the Scottish Ministers will be responsible for the decision to approve the grid connection, in reaching their decision, they will consult with statutory stakeholders and members of the public. Your feedback will therefore inform our on-going design and assessment work in future project stages.

Please note that your feedback does not constitute a formal consultation at this stage. You will have an opportunity to provide formal comments on the application for consent during the statutory consenting process.

What we would like your views on?

As part of the consultation, we would particularly like your views on:

- The preferred route for the 132 kV overhead line connection
- Any alternative route options which were considered during the routing process
- Any other issues, suggestions, or feedback you would like us to consider.

Your responses will be considered to inform the selection of the proposed route to be taken forward to future project stages.

How to make your views known?

You can submit comments until 1st November 2024. Feedback can be sent to:

Website:

www.spenergynetworks.co.uk/pages/newlands_hill_wind_energy_hub_132_kv_connection_project.aspx

Phone:

07516 461129

Email:

newlandshillproject@spenergynetworks.co.uk

Post:

Newlands Hill Project
Land and Planning Team
SP Energy Networks
55 Fullarton Drive
Glasgow G32 8FA



What would we like your views on?

We would like your views on:

- The preferred route for the 132 kV overhead line connection
- Any alternative route options which were considered during the routeing process
- Any other issues, suggestions, or feedback you would like us to consider.

You can submit comments on this project until 1st November. Feedback can be sent via the QR code below.

If you have any comments now, you can use post-in notes to help us understand your concerns.

Ecology

Visual Intrusion

Noise

Alternative routes

General Comments

Questions

